INSTRUMENT FOR MEASURIN[redacted]CCELERATIONS AND PROCESS OF [redacted]KING THE SAME

AA

AC = AA, AE

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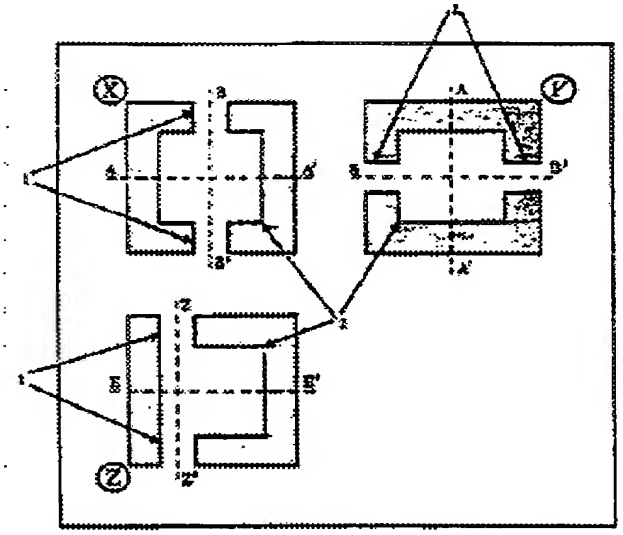
Abstract of **US5065628**

PCT No. PCT/DE88/00740 Sec. 371 Date Jun. 4, 1990 Sec. 102(e) Date Jun. 4, 1990 PCT Filed Dec. 1, 1988 PCT Pub. No. WO89/05459 PCT Pub. Date Jun. 15, 1989. Disclosed is an instrument for measuring accelerations, with the aid of which changes in motion in the three axes of space can be measured with selective sensitivity. In order to detect multi-dimensional changes in motion, three micromechanical sensors, each sensitive to the acceleration in a selected direction, are integrated in a crystal. The sensors are composed of torsion bars having masses eccentrically attached thereto, which, in the event of changes in motion, exercise torques about the axes of the torsion bars. The torques are measured with the aid of integrated piezo-resistances. The planar integration of the acceleration meter permits integrating the evaluation circuit on the same semiconductor surface. Acceleration meters of this kind are fabricated with the prescribed process in planar technology with the aid of epitaxy, lithography and anisotropic etching methods. High precision and high miniaturization make this acceleration meter suited for application in overland and aviation navigation and for component positioning in robotry.



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